

WORK PLAN:
SUBSURFACE EXPLORATION

Project #079-541B

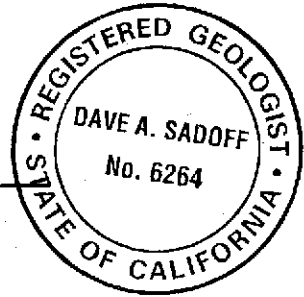
23rd Avenue Partners
1125 Miller Avenue
Oakland, California

Feb 2000

PREPARED BY ENVIRONMENTAL BIO-SYSTEMS, INC.
FOR
DREISBACH ENTERPRISES

Dave A. Sadoff

Dave A. Sadoff
Project Geologist, California R.G. No. 6264



18 February 2000

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Environmental Bio-Systems, Inc.

Innovative Solutions for a Better Environment

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1. INTRODUCTION

Environmental Bio-Systems, Inc. (EBS) has been retained by Dreisbach Enterprises (the Client) to prepare and carry out this work plan at 1125 Miller Avenue in Oakland, California (the Site). Site location map and site maps are included as Figures 1 and 2 in Appendix A.

The site is currently owned by the Client. The principal project contacts are:

Client: Mr. Allen Pelton, Dreisbach Enterprises, P.O. Box 7509, Oakland, CA 94601,
(510) 533-6600.

Consultant: Mr. Dave A. Sadoff, Project Manager, Environmental Bio-Systems, Inc.,
P.O. Box 7171, San Jose, CA 95150-7171, (408) 979-8600.

The scope of work described in this work plan is intended to assess the extent of petroleum hydrocarbon impact to site soil and ground water caused by an unauthorized fuel release from underground storage tanks (USTs). The release was discovered during the removal of two USTs in 1999. Preparation of this work plan has been requested by the Alameda County Health Care Services Agency (ACHCSA) in their letter to the Client dated 16 July 1999.

Fieldwork will not begin until the work plan has been approved by the ACHCSA.

2. PREVIOUS ENVIRONMENTAL WORK

December 1998

Two 5,000-gallon diesel USTs and associated product piping were removed from the site and disposed of at ECI in Richmond, California. Two soil samples were collected near the ends of each tank (four total) from approximately nine feet below ground surface (bgs).

The two soil samples collected from the easternmost UST were not found to contain reportable concentrations of total petroleum hydrocarbons calculated as diesel (TPHd), benzene, toluene, ethylbenzene or total xylenes (BTEX) or methyl t-butyl ether (MTBE). One of the two samples collected from the second tank was not found to contain reportable concentrations of TPHd, BTEX or MTBE. The fourth sample, collected from the northwest corner of the UST excavation, was found to contain 1,800 milligrams per kilogram (mg/kg) TPHd and 0.051 mg/kg total xylenes.

3. HEALTH AND SAFETY PLAN

A site-specific health and safety plan will be produced prior to commencement of fieldwork. This plan will include anticipated hazards, personal protective equipment requirements for site workers, and emergency procedures.

4. PERMITS

A drilling permit will be procured from the Alameda County Public Works Agency prior to work commencement. Permits will also be secured from the City of Oakland Department of Public Works for drilling in a city sidewalk.

5. FIELD PROCEDURES

The scope of work described in this work plan outlines the drilling of 3 exploratory soil cores (to be designated SC1 through SC3), the collection and analysis of soil and ground water samples, and the generation of a project report. All work will be performed by, or under, the direct supervision of a California Registered Geologist.

5.1. SUBSURFACE SURVEY

Proposed soil core locations will be marked with white paint as required by Underground Service Alert (USA). USA will then be notified at least 48 hours prior to the beginning of field work. EBS will also utilize a private utility locator to mark ferrous subsurface improvements. Any proposed soil core locations which may impact known subsurface improvements as discovered during the USA and private utility locator surveys will be moved to the nearest cleared location.

5.2. SOIL CORE LOCATIONS AND DRILLING METHODS

~~Three soil cores will be advanced~~ via direct push technology using a truck mounted Geoprobe (or similar) rig. The borings will be drilled at or near the locations depicted on Figure 2.

5.3. SOIL SAMPLING

Soil samples will be collected from the cores in clear acetate sleeves housed within the push-probe. The sleeves will be visually inspected and cut to remove appropriate sampling intervals. The ends of the cut sleeves will be sealed with Teflon™ sheets and tight fitting caps upon removal from the sampler. Each sleeve section will then be labeled with a unique designation for this project. A chain of custody will be initiated in the field and will accompany all submitted samples to the laboratory.

At least one soil sample will be submitted for laboratory analyses from each soil core at just above the soil/ground water interface. Ground water is anticipated to be encountered at approximately 10 feet bgs. Additional soil samples from other horizons may be submitted if field observations (e.g. elevated PID readings, soil discoloration) indicate the possibility of petroleum hydrocarbon impact.

include soil sample beneath dispenser

5.3.1. Drill Cuttings

All soil cuttings generated during drilling will be contained within Department of Transportation (DOT) approved 5-gallon buckets. The labeled buckets will be staged on-site pending analytical results.

5.4. WATER SAMPLING

Water samples will be collected from each of the three soil cores through pre-packed well screen that will be inserted into the cores. A small diameter bailer will then be used to retrieve samples of accumulated water within the temporary wells. Water samples will be placed into appropriate containers and labeled with a unique designation for this project. All samples intended for chemical analysis will be placed inside an insulated cooler on top of crushed ice pending receipt by the laboratory. A chain of custody will be initiated in the field and will accompany all samples to the laboratory.

5.5. SAMPLE ANALYSES

All soil and ground water samples will be analyzed by Analytical Sciences, (AS) of Petaluma, California. AS is certified by the California environmental laboratory accreditation program (ELAP) for the requested analyses.

All soil and water samples submitted for laboratory analysis will be analyzed for the following:

- ~~TPH~~ using the Environmental Protection Agency (EPA) Method 8015.
- ~~BTEX and MTBE~~ using EPA Method 8020 (MTBE confirmed by EPA ~~8260~~).

5.6. DECONTAMINATION PROCEDURES

All downhole drilling and sampling equipment will be cleaned using an Alconox solution, tap water rinse, and deionized water rinse prior to the drilling of each boring. All decontamination water will be stored in a labeled drum approved by the Department of Transportation (DOT) for this purpose. The drum will be staged on-site pending analytical results.

6. DOCUMENTATION

A final report documenting the observations, results, conclusions, and recommendations will be prepared and submitted upon completion of fieldwork. The report will include scaled diagrams, laboratory analytical reports, and chain of custody documentation.

7. CONDITIONS

The scope of work described in this work plan will be conducted in accordance with generally accepted standards of current environmental practice in California. All documentation generated during the project, including but not limited to additional Work Plans and reports with all conclusions, and recommendations contained therein, shall be time-dependent and should not be considered valid after a 1-year period from their issue. After 1 year from issue, site conditions and recommendations contained within Work Plans and reports should be reviewed.

Evaluation of the condition of the Site, for the purpose of this study, will be made from a limited number of observation points. Subsurface conditions may deviate away from these points. Additional work, including further study of the subsurface, can reduce the inherent uncertainties associated with this type of work.

This study will be performed, and the report prepared for the sole use of our client, Dreisbach Enterprises. All reports and the findings contained within are not to be disclosed to nor used by any other party without the prior written consent of Environmental Bio-Systems, Inc. It will be the responsibility of the client to convey any and all recommendations to regulatory agencies and other parties, as appropriate.

The recommendations to be provided in the summary project report will be professional opinions that our firm has endeavored to provide with competence and reasonable care. We are not able to eliminate the risks associated with environmental work. No guarantees or warrants, express or implied, are provided regarding our recommendations.

Any and all hazardous or non-hazardous wastes generated during this work are to remain the property of the Client to be disposed of properly. The maximum liability of EBS for any reason attendant to the services provided shall not exceed \$15,000.00.

It is the clients' responsibility to identify property lines and easements. EBS is not responsible for the accuracy of any property line, easement, or other markers identified by the client.

It is the clients' sole responsibility to inform EBS of any hazardous materials or conditions relating to the UST or the work area in general prior to the progression of fieldwork, or immediately upon their subsequent discovery.

EBS will contact Underground Service Alert (USA), a public utilities locating service which is provided by the utility companies. USA will mark the location of utilities on public property. USA is not responsible for the location of utilities on private property. The services of a private utility locator are also included in this scope of work. EBS will not be liable for any damages to underground structures as a result of subsurface activities.

8. REFERENCES

Alameda County Health Care Services Agency, Letter to East 23rd Avenue Partners, 16 July 1999.

Environmental Bio-Systems, Inc., UST Excavation, 23rd Avenue Partners, 1125 Miller Avenue, Oakland, California, 21 April 1999.

United States Geological Survey, Oakland East, California Quadrangle Map, 7.5-Minute Series, Topographic, 1959, Photorevised 1980.

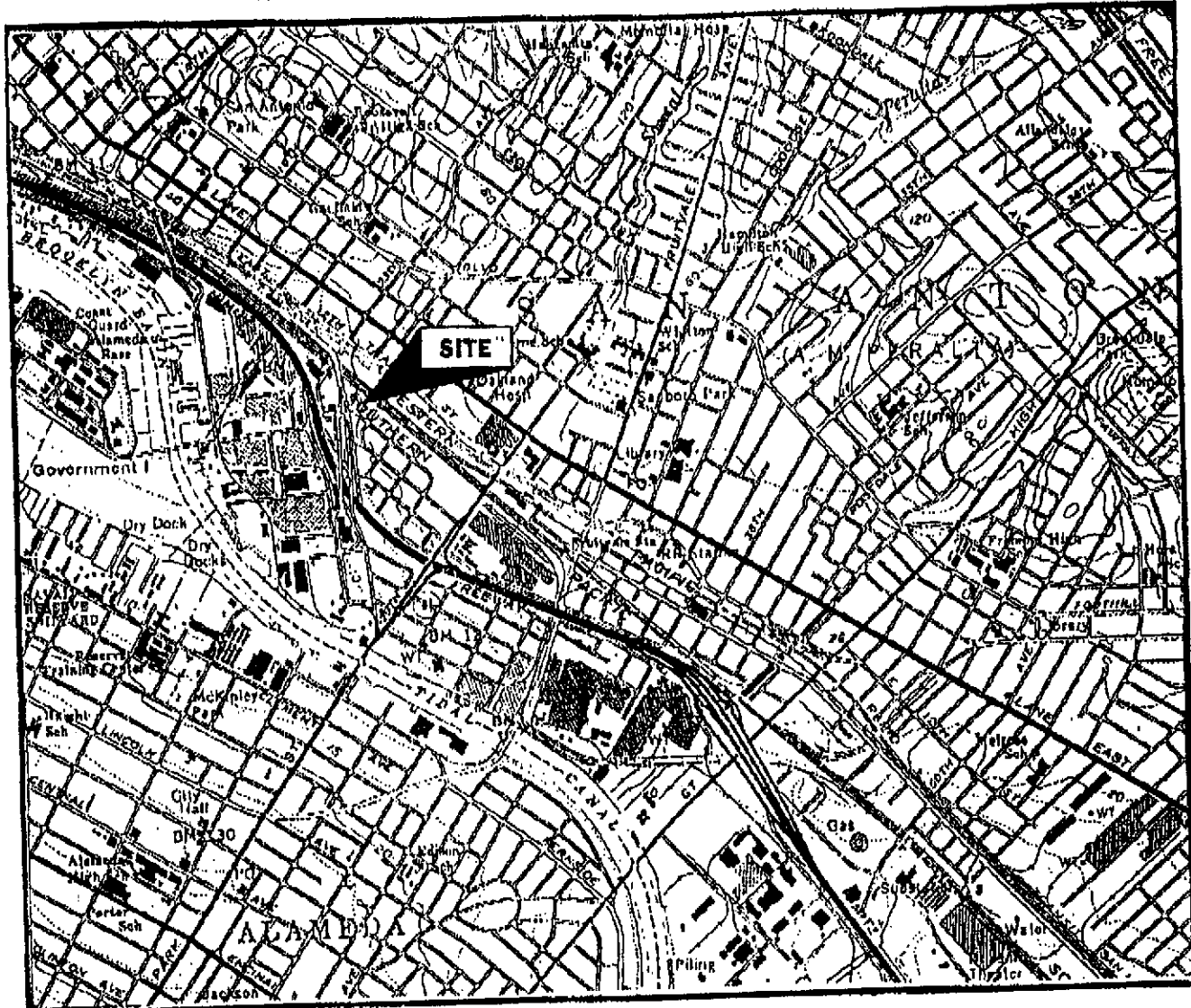
27 January 2000

Work Plan: Subsurface Exploration
East Bay Dischargers Authority
2651 Grant Avenue, San Lorenzo, California

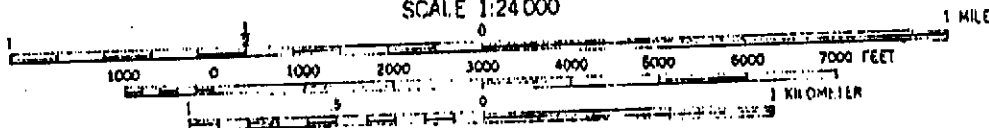
Appendix A

APPENDIX A:

FIGURES



SCALE 1:24,000



CONTOUR INTERVAL 20 FEET

DOTTED LINES REPRESENT 5-FOOT CONTOURS
 NATIONAL GEOLOGIC VERTICAL DATUM OF 1929
 DEPTH CURVES IN FEET--DATUM IS MEAN LOWER LOW WATER
 THE RELATIONSHIP BETWEEN THE TWO DATUMS IS VARIABLE
 SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF HIGH WATER
 THE MEAN RANGE OF TIDE IS APPROXIMATELY 6 FEET



QUADRANGLE LOCATION

Source: USGS Oakland East, California 7.5 Minute Quadrangle Map



DATE:
3/31/99

DRAWN BY:
DAS

SCALE:
1" = 2,000'



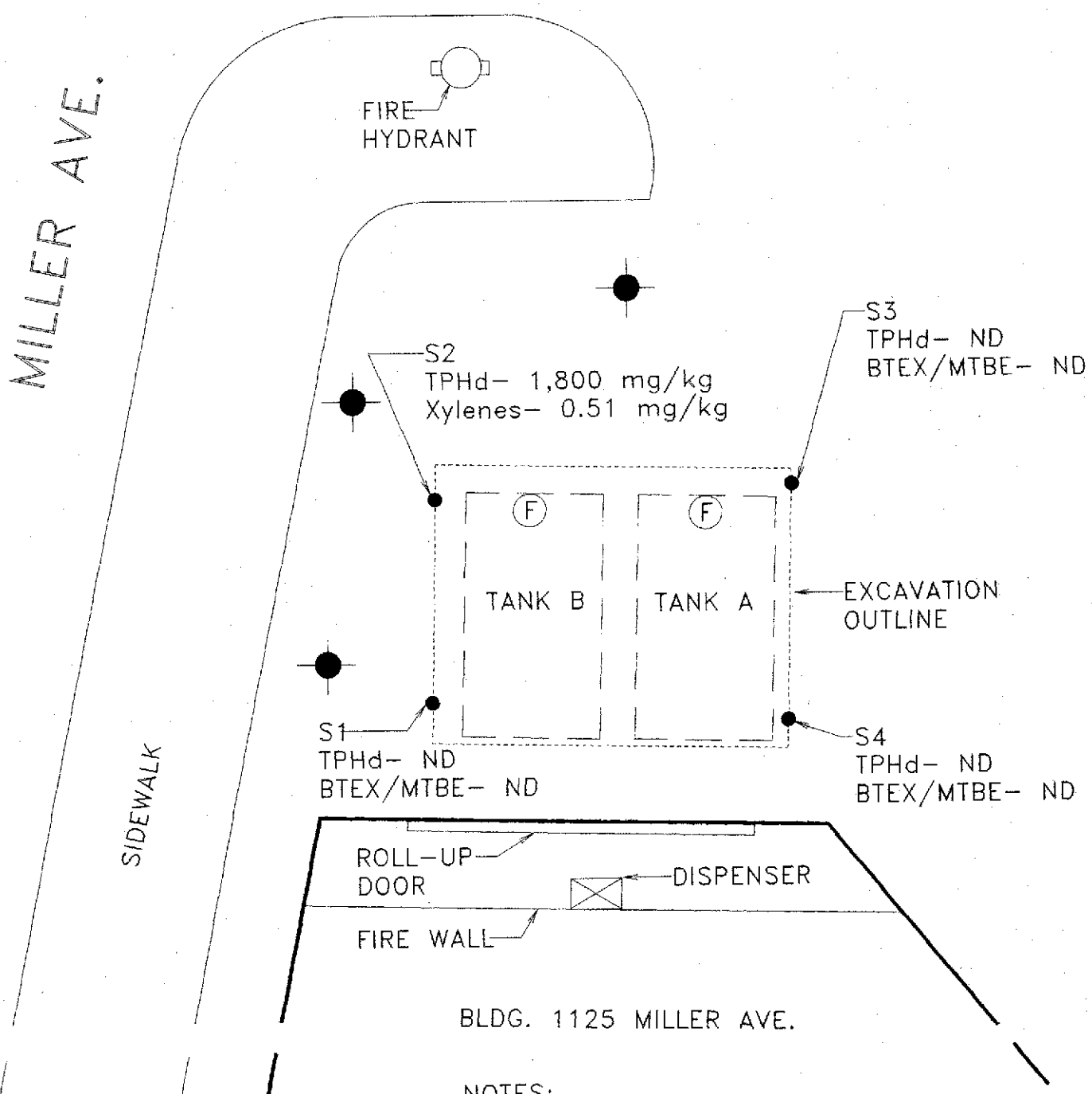
FIGURE 1:
SITE LOCATION MAP

23rd AVENUE PARTNERS
1125 MILLER AVENUE
OAKLAND, CALIFORNIA

ENVIRONMENTAL BIO-SYSTEMS, INC., PROJECT #079-007AB

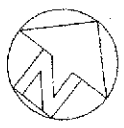
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FIGURE 2: PROPOSED CORE LOCATIONS

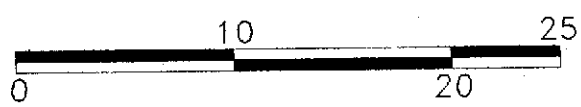


NOTES:

● Proposed Soil Core and Temp. Well Locations
 Sample results expressed in milligrams per kilogram (mg/kg).



SCALE (in feet)



Client: Dreisbach Enterprises
 Site: 1125 Miller Ave., Oakland, CA
 Project: Subsurface Exploration
 EBS Project #: 079-541A
 Date: 2/18/2000.